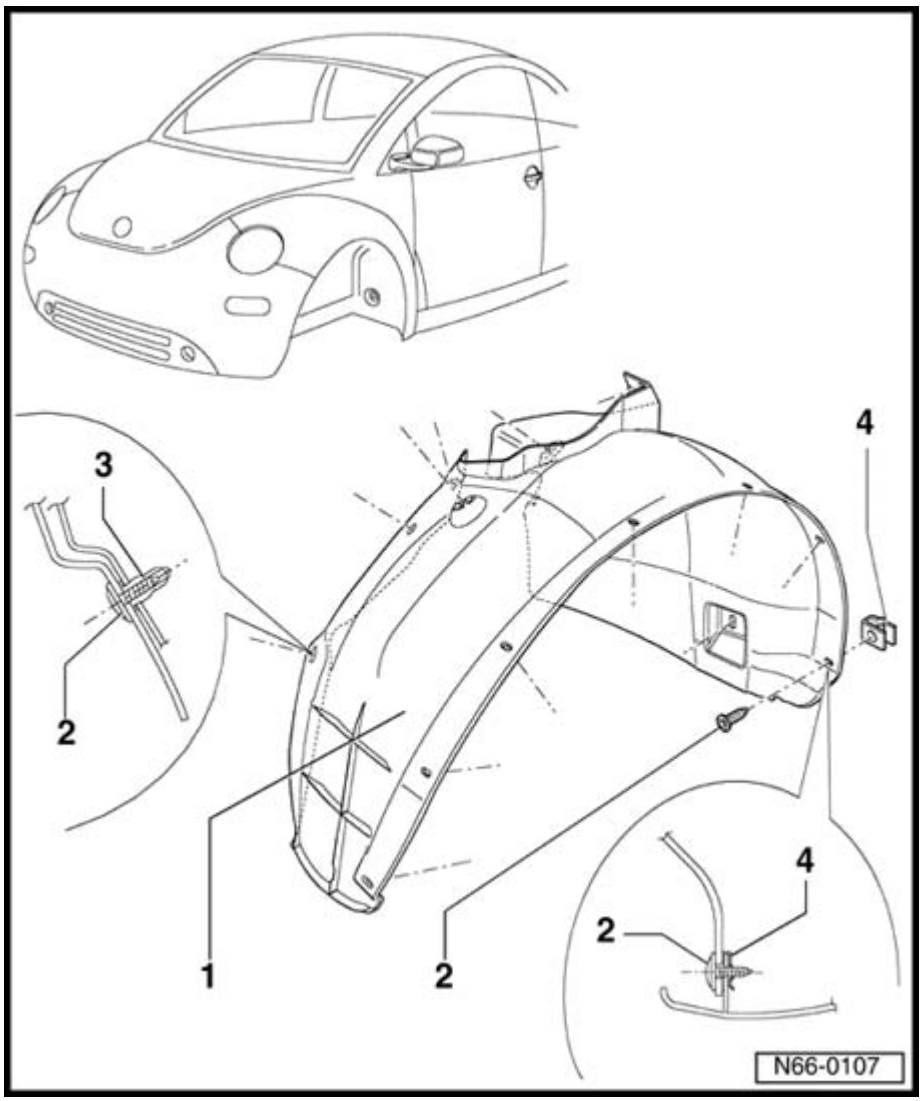
Volkswagen New Beetle

Wheel housing liner, removing and installing

Front wheel housing liner



- **Wheel housing liner**
  - Material - PP/EPDM
  - Removing:

- Remove wheel.
Tightening torque of wheel bolts = 120 Nm.

- Remove bolts ⇒ Item - 2 - (15x) and remove wheelhousing liner.

- **Bolt**
  - Mounting sequence for vehicles 07.05 ⇒ Topic

66-1

- Torque 4 Nm. (35 in. lbs.)

- **Expanding nut**
- **Speed nut**
  - Installed onto bumper cover or fender

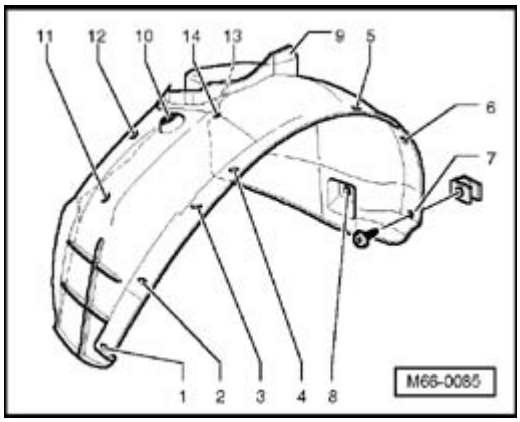
Bolt mounting sequence for vehicles 07.05

Note *:*

- *Some vehicles have what appears to be a fender imperfection when viewed at an angle in bright sunlight.*

Caution!

DO NOT attempt fender repair. Loosening and re-tightening of the inner fender bolts in the provided sequence will eliminate the concern.

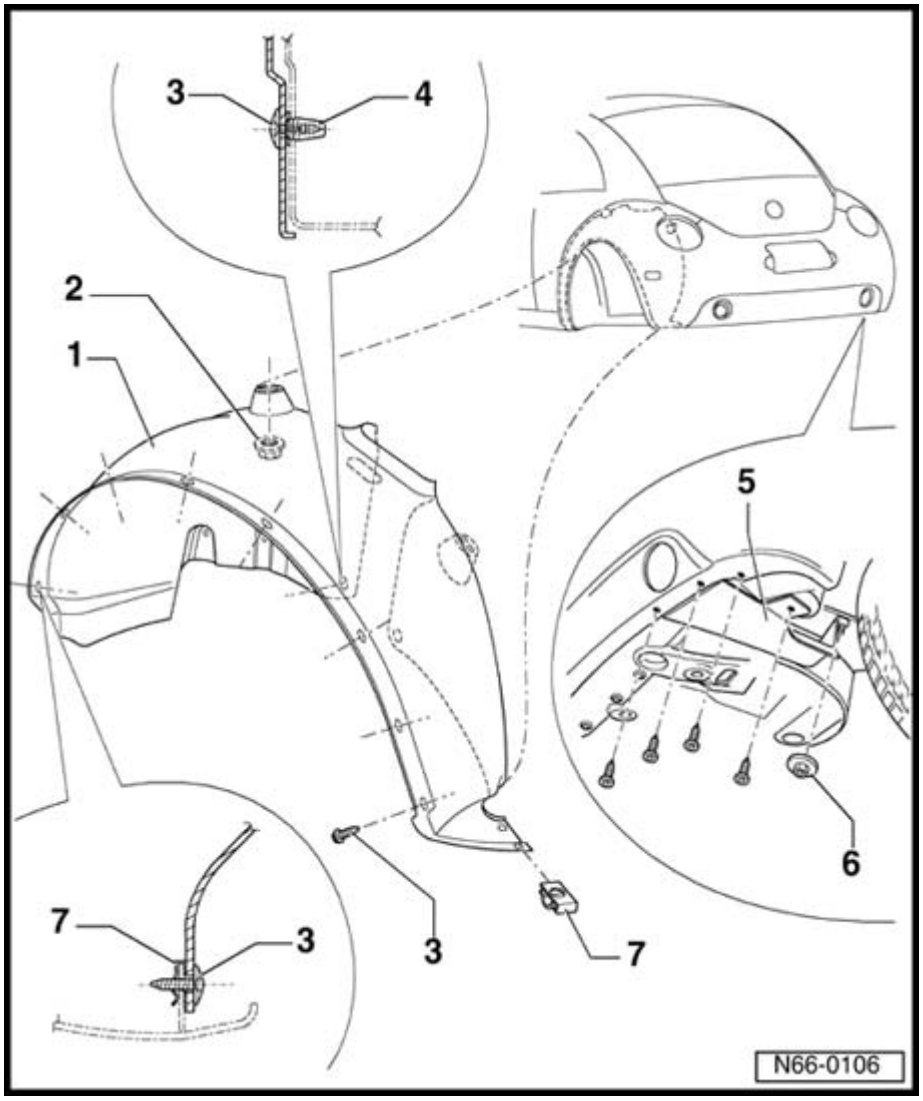


Rear wheel housing liner

Note:

- *Depending on equipment, wheel housing liners differ slightly regarding position and number of securing elements.*

Wheel housing liner, removing and installing



- **Wheel housing liner**
  - Material - PP/EPDM
  - Removing:

  - Remove wheel.
  Tightening torque of wheel bolts = 120 Nm.

  - Remove cover and wheel housing liner connecting bolts, right side only.

  - Guide fuel tank filler module through hose retainer (Convertible), right side only.

  - Remove bolts ⇒ Item - 3 - (14x) and nut ⇒ Item - 2 - and remove wheel housing liner.

Wheel housing liner, removing and installing

- **Nut**
- **Bolt**
  - Mounting sequence for vehicles 07.05 ➢ ⇒ Topic 66-1
  - Torque 4 Nm. (35 in. lbs.)
- **Expanding nut**
- **Cover**
  - Only right side
- **Spring nut**
- **Speed nut**
  - Installed onto bumper cover or fender

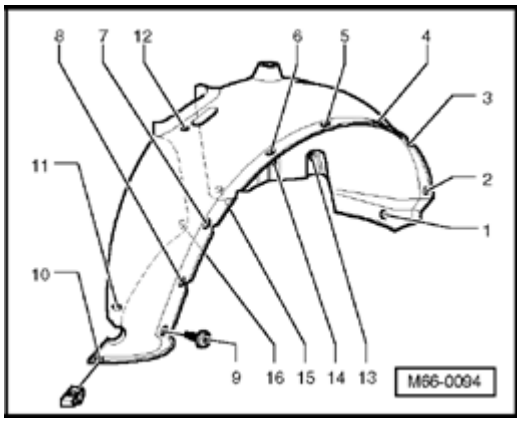
Bolt mounting sequence for vehicles 07.05 ➢

Note *:*

- *Depending on equipment, wheel housing liners differ slightly regarding position and number of securing elements.*

Caution!

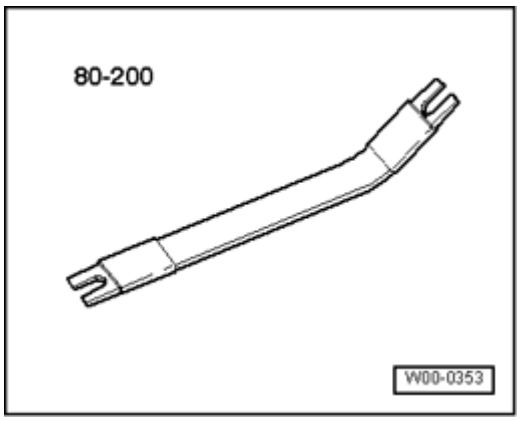
DO NOT attempt fender repair. Loosening and re-tightening of the inner fender bolts in the provided sequence will eliminate the concern.



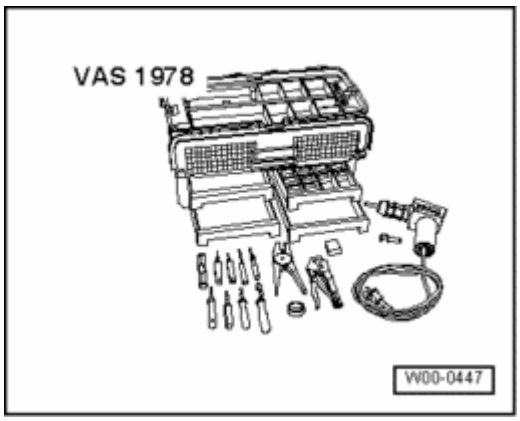
Exterior rearview mirror

Tools

Special tools, testers and auxiliary items required



- Pry Lever - Rmv Outside Mirror 80-200



- Wiring Harness Repair Kit VAS 1978

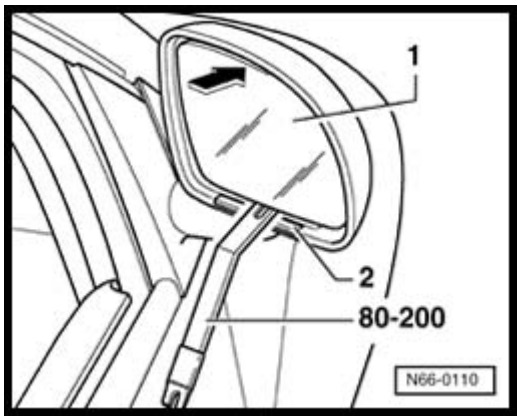
Mirror glass, removing and installing

Note:

- *Wear protective goggles and protective gloves when working!*

- Switch off ignition and all electrical consumers and remove ignition key.

Removing



- Protect housing edges against paint damage e.g. using fabric-reinforced adhesive tape **- 2 -** .

- Press mirror glass **- 1 -** into mirror housing at top **- arrow -** .

- Press mirror glass **- 1 -** off bracket in housing using Pry Lever - Rmv Outside Mirror 80-200 and disconnect harness connectors for mirror heater from rear side of mirror glass.

Installing

- Connect connector terminals for mirror heater to mirror glass.

- Press mirror glass at center on bracket in housing.

Mirror housing, removing and installing

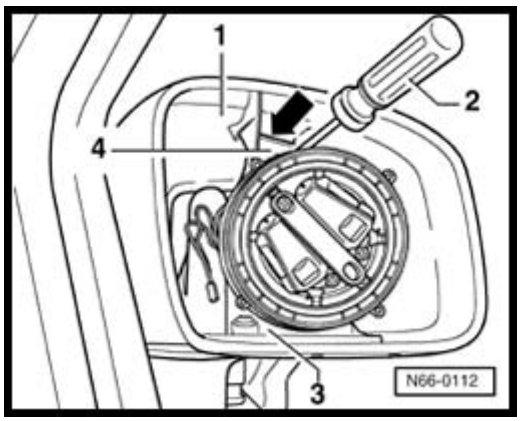
- New Beetle Sedan ➢ 05.00 ⇒ 66-2, New Beetle Sedan 05.00 .

- New Beetle Sedan ➢ 06.00 ⇒ 66-2, New Beetle Sedan 06.00 .

- New Beetle Convertible ⇒ 66-2, New Beetle Convertible .

- Remove mirror glass ⇒ 66-2, Mirror glass, removing and installing .

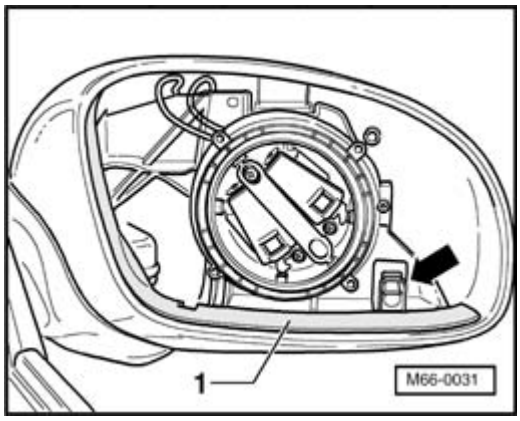
New Beetle Sedan ➢ 05.00



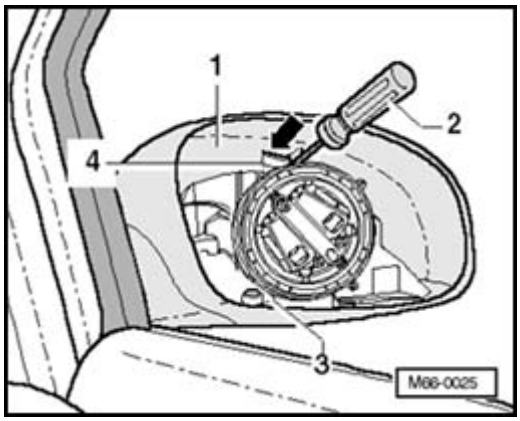
- Press screwdriver **- 2 -** in **- direction of arrow -** against locking mechanism under retainer **- 4 -** and disengage mirror housing **- 1 -** .

- Pull off mirror housing **- 1 -** upward from mirror carrier **- 3 -** .

New Beetle Sedan 06.00



- Unclip trim **- 1 -** from mirror housing. Loosen locking mechanism using screwdriver **- arrow -** , to do so.

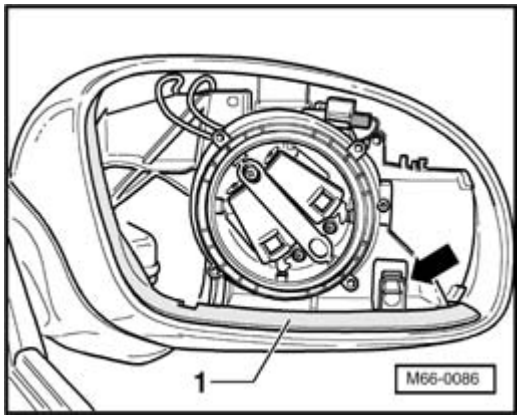


- Press screwdriver **- 2 -** in **- direction of arrow -** against locking mechanism above retainer **- 4 -** and disengage mirror housing **- 1 -** .

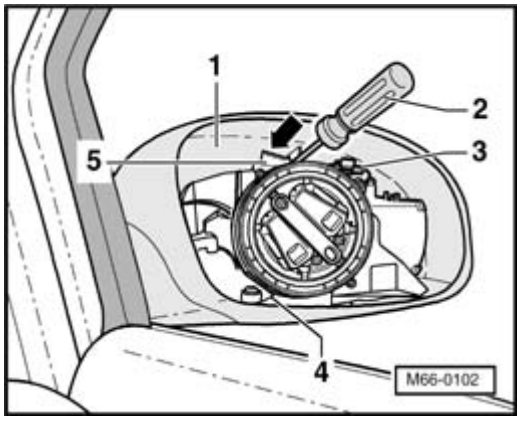
- Loosen mirror housing **- 1 -** from lower retainer **- 3 -** and remove mirror housing from mirror carrier **- 3 -** by turning respectively.

New Beetle Convertible

- Switch off ignition and all electrical consumers and remove ignition key.



- Unclip trim **- 1 -** from mirror housing. Loosen locking mechanism using screwdriver **- arrow -** , to do so.



- Press screwdriver **- 2 -** in **- direction of arrow -** against locking mechanism above retainer **- 5 -** and disengage mirror housing **- 1 -** .

- Loosen mirror housing **- 1 -** from lower retainer **- 4 -** and unlock connector for mirror turn signal lamp **- 3 -** and remove.

- Remove mirror housing **- 1 -** from mirror carrier **- 4 -** by turning respectively.

Installing

- The respective assembly follows the reverse of the removal procedures.

Mirror turn signal light, removing and installing

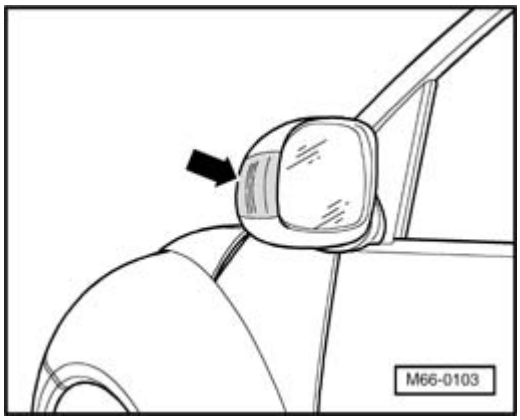
Note:

- *The mirror turn signal lamp in the rear mirror is a long-lasting light emitting diode (LED) installed, not a conventional light bulb.*

- *If damaged, the entire turn signal must be replaced.*

Removing

- Switch off ignition and all electrical consumers and remove ignition key.

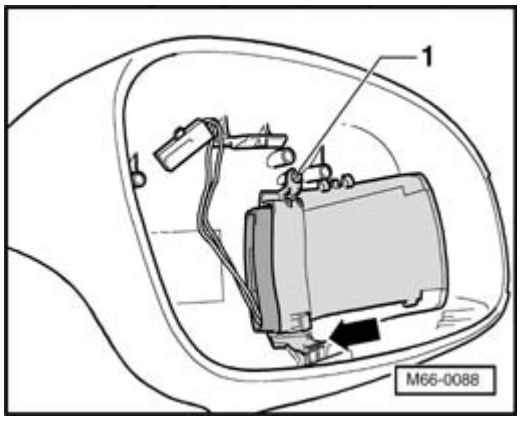


Drivers Exterior Mirror Turn Signal Lamp L131 and Front Passengers Exterior Mirror Turn Signal Lamp L132 are installed in respective rear mirror housing **- arrow -** .

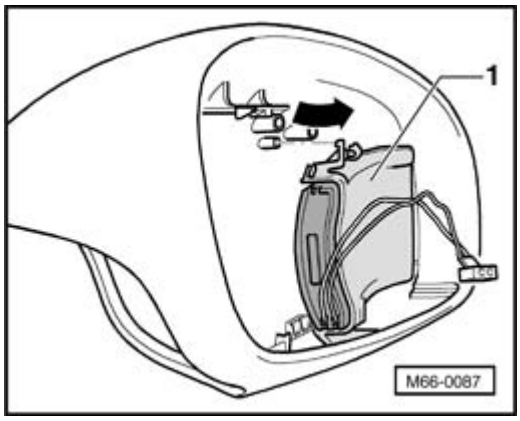
Perform the following work to remove mirror turn signal lamp:

- Remove mirror glass ⇒ 66-2, Mirror glass, removing and installing .

- Remove mirror housing ⇒ 66-2, Mirror housing, removing and installing .

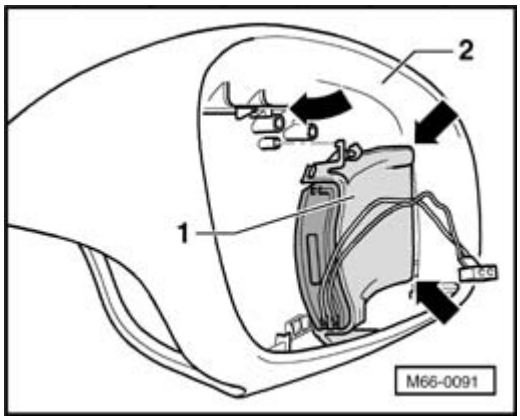


- Remove bolt **- 1 -** inside of mirror housing and unclip catch **- arrow -** .

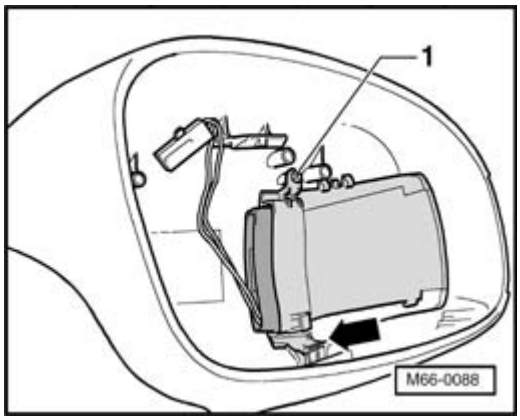


- Swing mirror turn signal lamp **- 1 -** in **- direction of arrow -** and remove.

Installing



- Install mirror turn signal lamp **- 1 -** into mirror housing **- 2 -** as shown **- arrows -** and swing in **- direction of arrow -** .



- Clip catch **- arrow -** and tighten bolt **- 1 -** to 1 Nm.

The rest of the installation follows the reverse of the removal procedures.

Exterior rearview mirror, removing and installing

- New Beetle Sedan ➢ 05.00 ⇒ 66-2, New Beetle Sedan 05.00 .

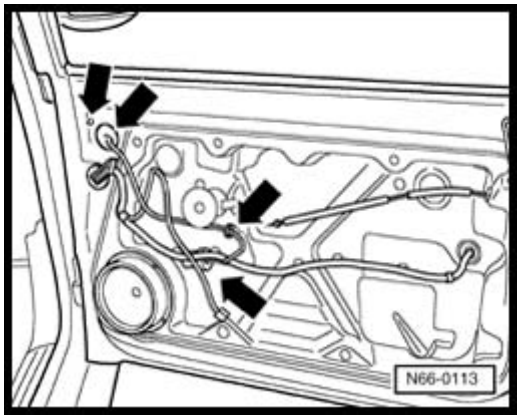
- New Beetle Sedan ➢ 06.00 ⇒ 66-2, New Beetle Sedan 06.00 .

- New Beetle Convertible ⇒ 66-2, New Beetle Convertible .

New Beetle Sedan ➢ 05.00

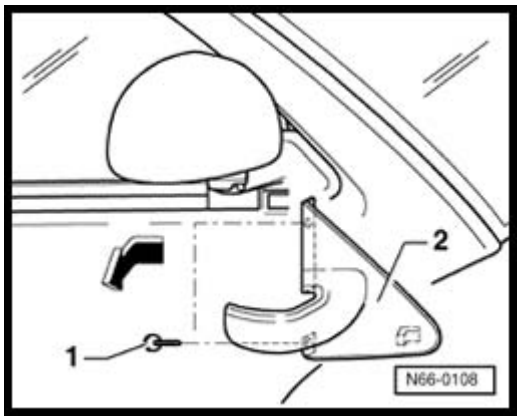
- Remove front door trim

⇒ *Repair Manual, Body Interior, Repair Group 70, Door trim, removing and installing*

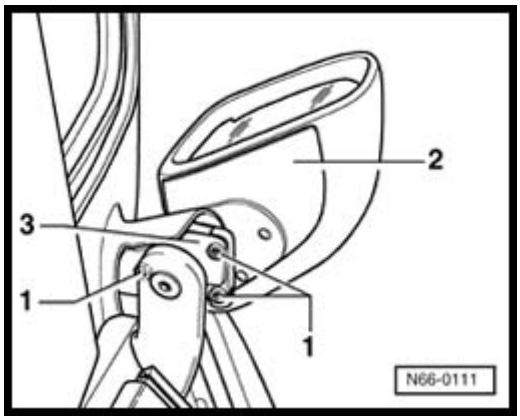


- Disconnect harness connector for rearview mirror and disengage wire at subframe and door **- arrows -** .

- Wrap connector with adhesive tape for threading (otherwise may get stuck in door) or push connectors out of connector housing using prodding tool from VAS 1978 .



- Remove bolts **- 1 -** and remove triangular panel **- 2 -** toward rear **- arrow -** .



- Remove bolts **- 1 -** and remove rearview mirror **- 2 -** from door hinge **- 3 -** . Tightening torque: Bolts **- 1 -** = 10 Nm

Note:

- *Hidden bolt is accessible after opening door.*

- *Guide electrical wire through door openings.*

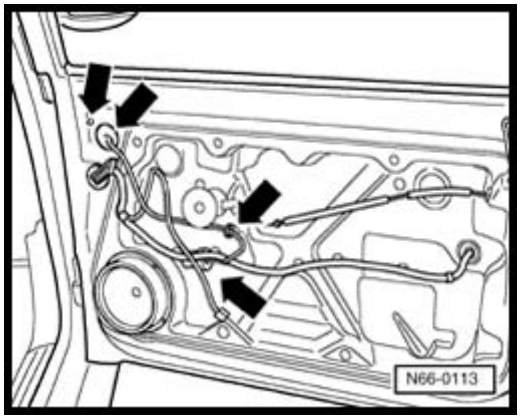
- Installation is performed in the reverse order of removal.

- Route and secure wiring correctly again, especially in window recess, otherwise window may be blocked when opened or closed. Perform function test!

New Beetle Sedan 06.00

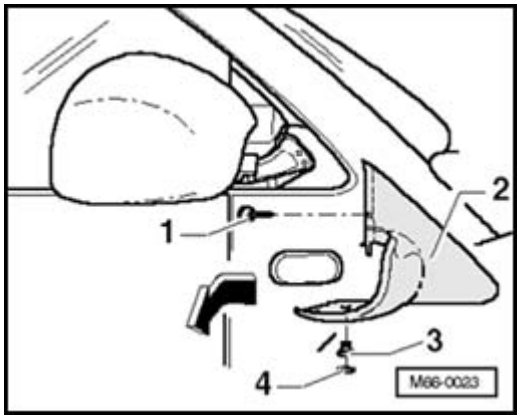
- Remove front door trim

⇒ *Repair Manual, Body Interior, Repair Group 70, Door trim, removing and installing*



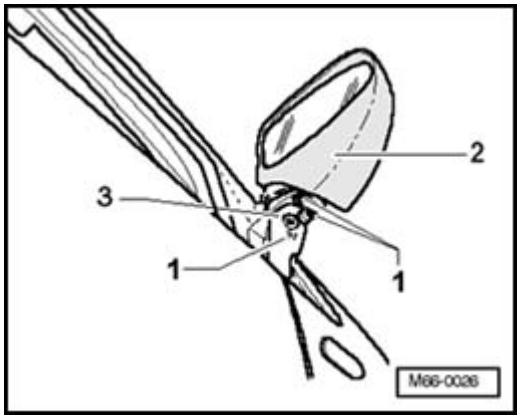
- Disconnect harness connector for rearview mirror and disengage wire at subframe and door **- arrows -** .

- Wrap connector with adhesive tape for threading (otherwise may get stuck in door) or push connectors out of connector housing using prodding tool from VAS 1978 .



- Remove cap **- 4 -** using screwdriver.

- Remove bolts **- 1 -** and **- 3 -** and remove triangular panel **- 2 -** toward rear **- arrow -** .



- Remove bolts **- 1 -** and remove rearview mirror **- 2 -** from door hinge **- 3 -** . Tightening torque: Bolts **- 1 -** = 10 Nm

Note:

- *Hidden bolt is accessible after opening door.*
- *Guide electrical wire through door openings.*

- Installation is performed in the reverse order of removal.

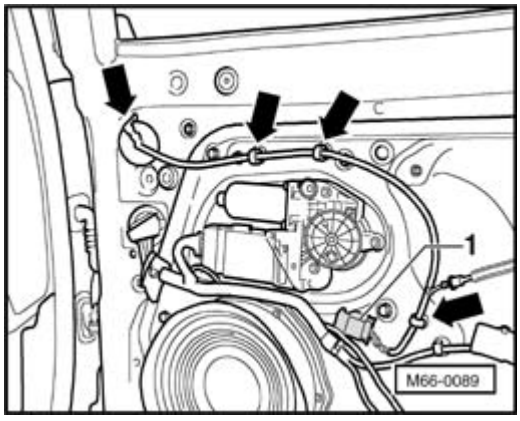
- Route and secure wiring correctly again, especially in window recess, otherwise window may be blocked when opened or closed. Perform function test!

New Beetle Convertible

- Switch off ignition and all electrical consumers and remove ignition key.

- Remove front door trim

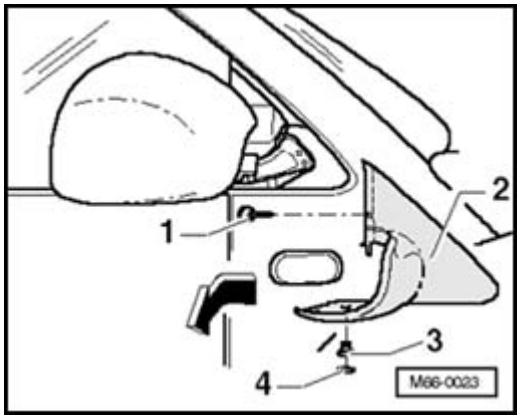
⇒ *Repair Manual, Body Interior, Repair Group 70, Door trim, removing and installing (Convertible)*



- Disconnect harness connector for rearview mirror **- 1 -** and set aside wire at subframe and door **- arrows -** .

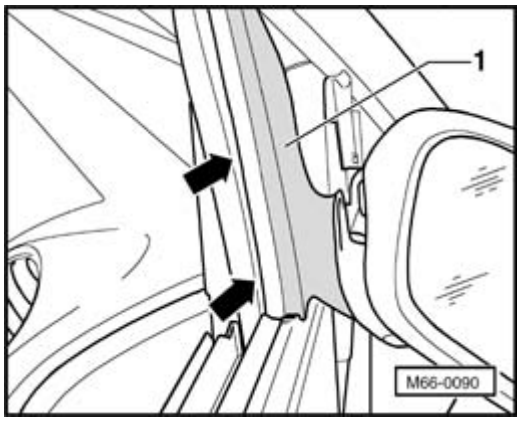
- Wrap connector with adhesive tape for threading (otherwise may get stuck in door).

- Fold rearview mirror toward rear for easier installation.



- Remove cap **- 4 -** using screwdriver.

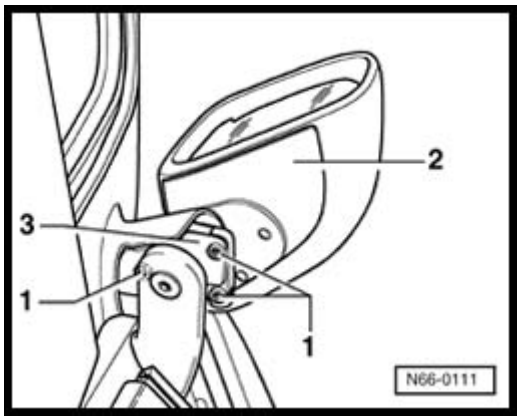
- Remove bolts **- 1 -** and **- 3 -** and remove front triangular panel **- 2 -** toward rear **- arrow -** .



- Remove hidden bolts in front window guide **- arrows -** .

- Remove rear cover **- 1 -** .

- Remove insulation for rear cover.



- Remove bolts **- 1 -** and remove rearview mirror **- 2 -** from door hinge **- 3 -** . Tightening torque: Bolts **- 1 -** = 10 Nm

Installing

- The respective assembly follows the reverse of the removal procedures.

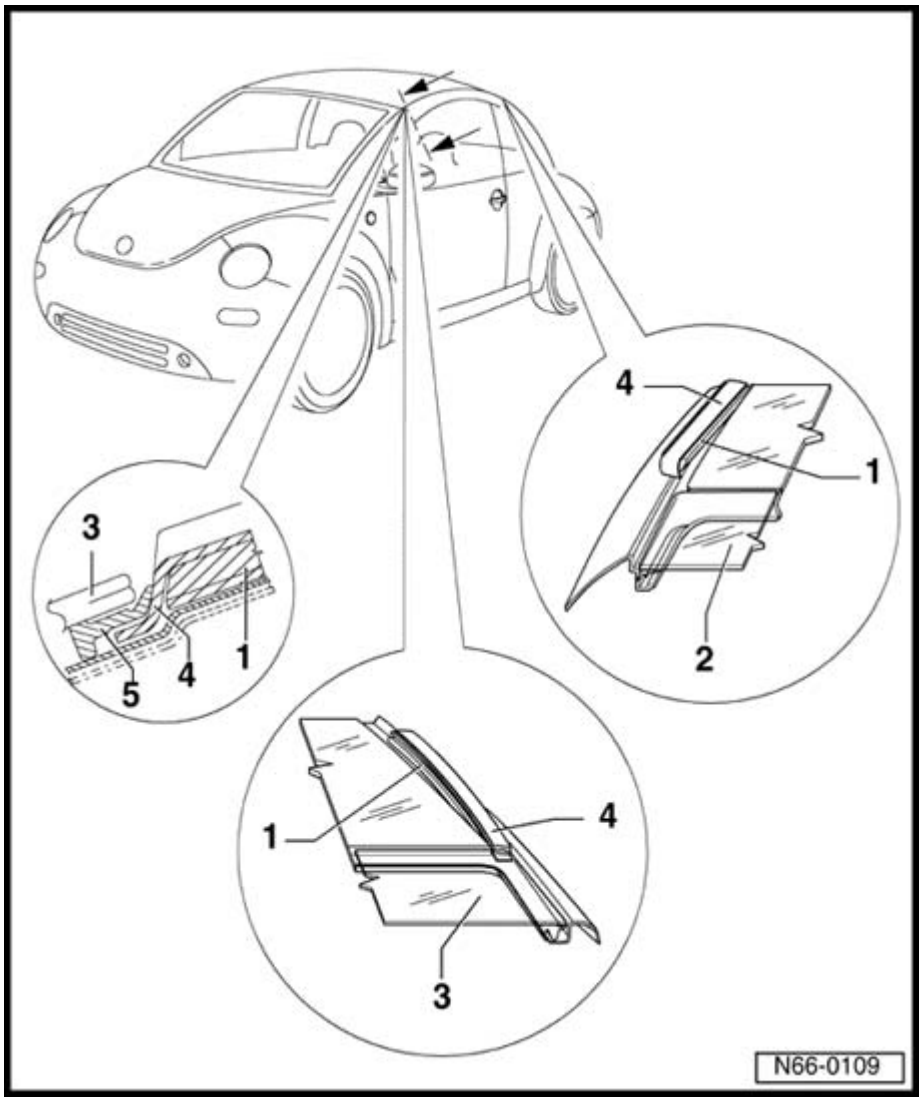
Note:

- *Guide electrical wire through door openings.*

- *Route and secure wiring correctly again, especially in window recess, otherwise window may be blocked when opened or closed. Perform function test!*

Roof moldings

Roof molding



- **Roof molding**
  - With cover strip ⇒ Item - 4 -
  - Do not bend roof molding

  - Removing: Pry off starting at rear window using plastic wedge.

  - Installing: Fit front cover strip under windshield flush into roof channel end and press into roof channel from front toward rear until stop.

- **Rear window**

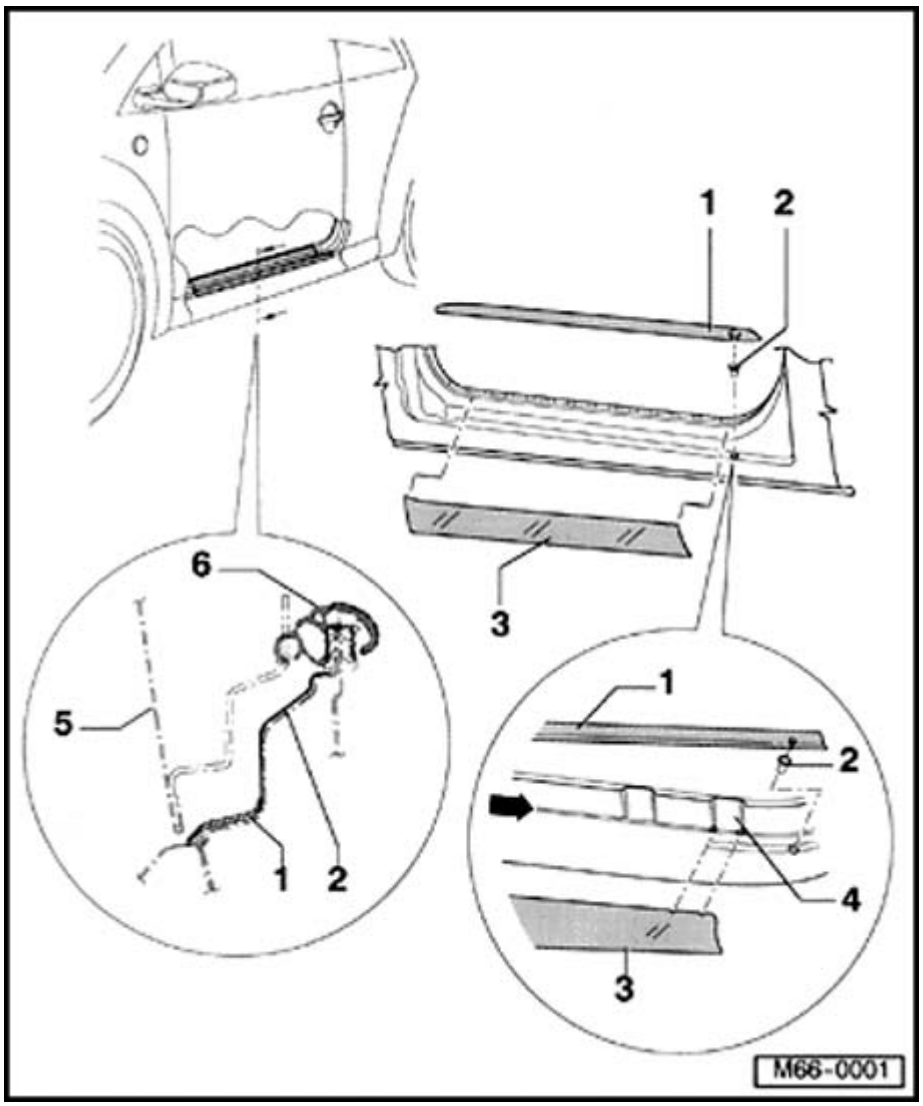
- **Windshield**
- **Cover strip**
  - Installing:

  - Insert cover strip into pocket of roof molding up to stop, then press into roof channel.

- **Sealing lip (component part of windshield)**

Protective moldings

Sill panel strips, replacing



- **Sill panel strip**
  - Self-adhesive
  - Removing:

  - Heat sill panel strip using hot air gun before removing.

  - Installing:

  - Clean outer panel with mineral spirits, treat with silicone remover and rub dry.

  - Install scuff guard foil ⇒ Item - 3 - .

- Insert grommet ⇒ Item - 2 - into sill hole.

- Peel off protective paper, position sill panel strip using guide pin and adhere (press on firmly). Processing temperature approx. 20 ° C.

- **Grommet**
- **Scuff guard foil**
  - Self-adhesive
  - Installing:

- Clean outer panel with mineral spirits, treat with silicone remover and rub dry.

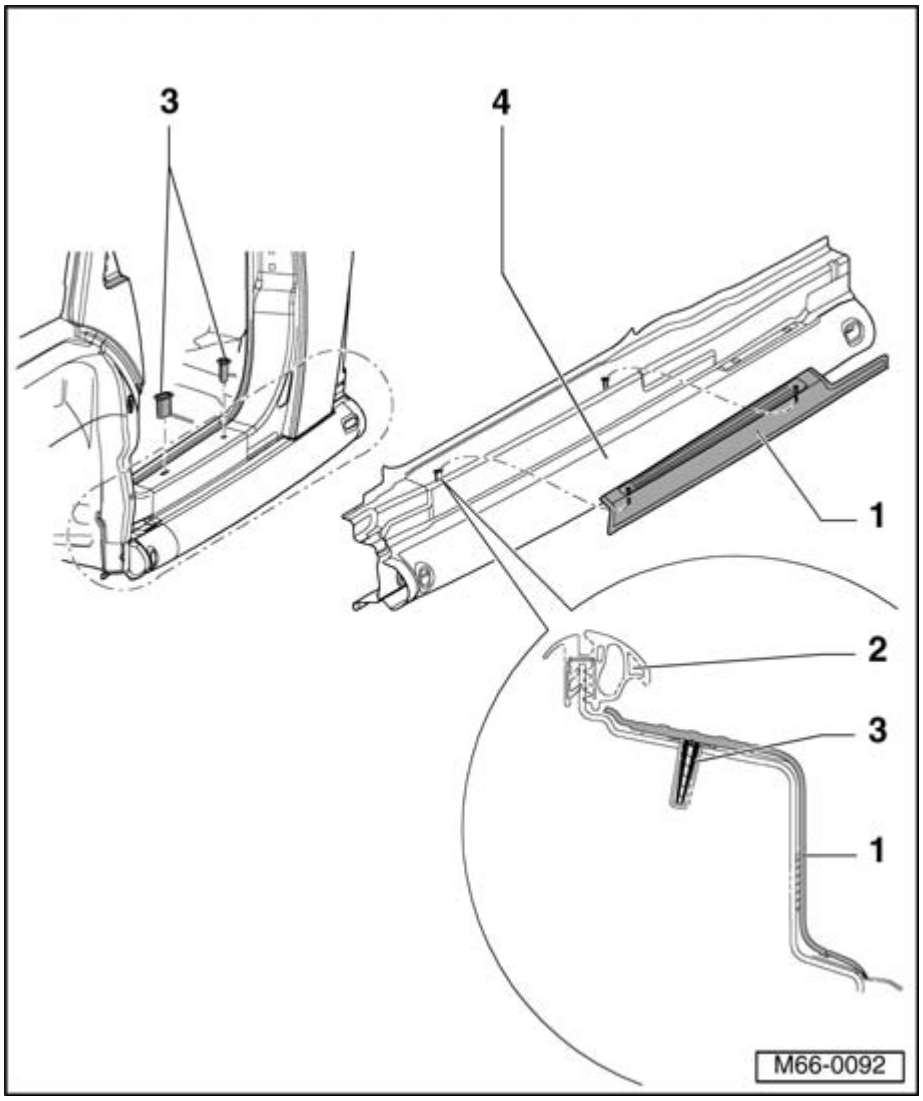
- Peel off narrow protective paper and position scuff guard foil at impression ⇒ Item - 4 - .

- Bond scuff guard foil along reference edge **- arrow -** .

- Peel off remaining protective paper and bond scuff guard foil completely.

- **Impression**
  - First impression is used as reference point for positioning scuff guard foil ⇒ Item - 3 -
- **Door**
- **Internal door seal**
  - Peel off for installing scuff guard foil

Sill panel strips, replacing (Convertible)



- **Sill panel strip**
  - Self-adhesive
  - Removing:

  - Heat sill panel strip using hot air gun before removing.

  - Installing:

  - Clean outer panel with mineral spirits, treat with silicone remover and rub dry.

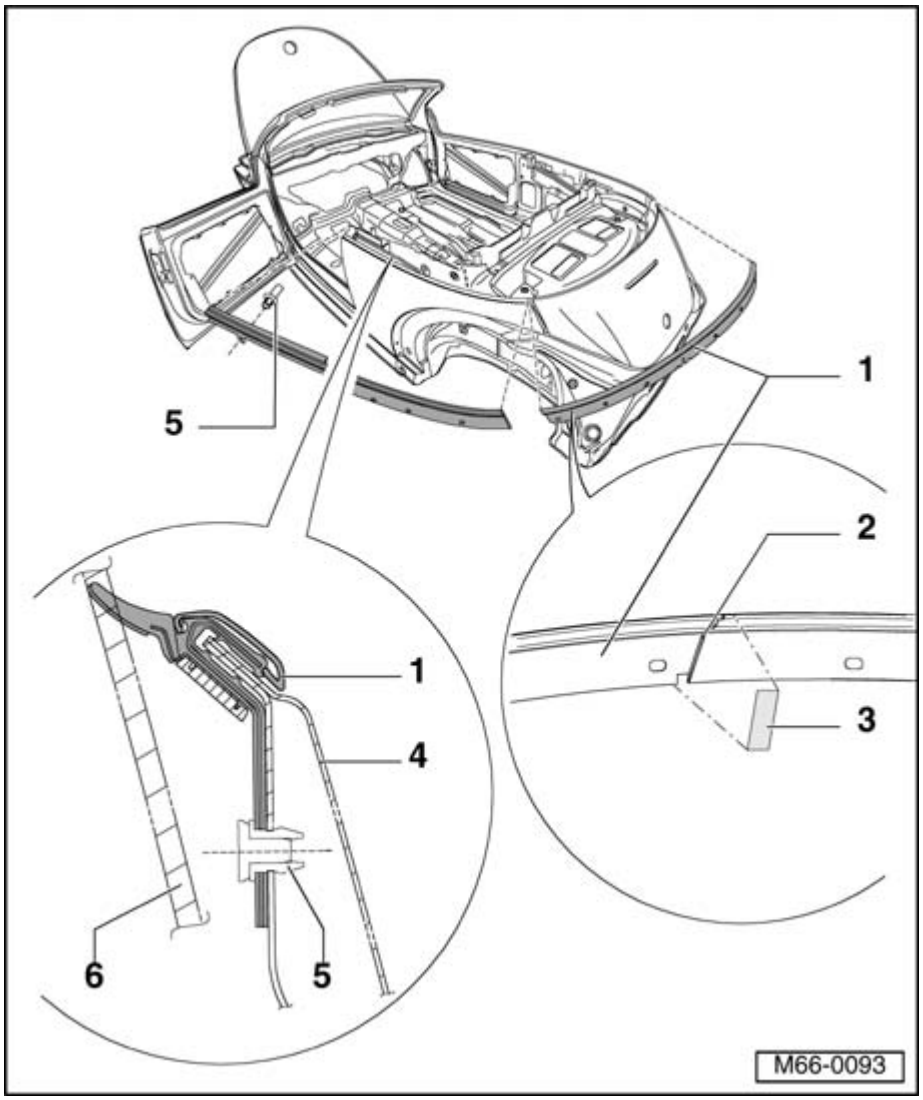
  - Insert grommet ⇒ Item - 3 - into sill hole.

  - Peel off protective paper, position sill panel strip using guide pin and adhere (press on firmly). Processing temperature approx. 20 ° C.

- **Internal door seal**
  - Peel off for installing scuff guard foil
- **Grommet**
- **Sill**

Convertible top frame protective strip, removing and installing (Convertible)

Assembly overview



- **Protective strip**
- **Butyl sealing cord**
- **Textile tape**
- **Side panel**
- **Expanding rivet**

- 2x

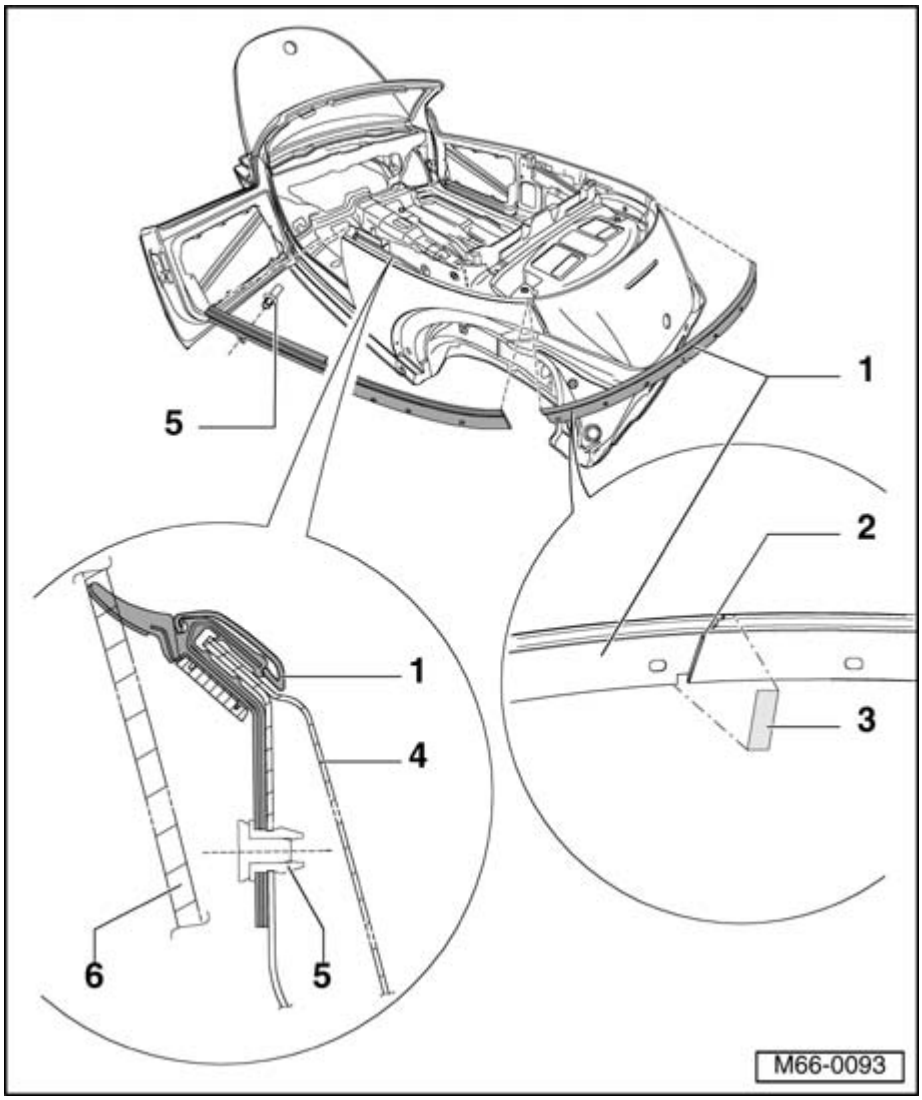
- **Side window**

Removing

- Convertible top fabric retaining frame:

  - Electric-/hydraulic convertible top ⇒ 61-1, Electric-/hydraulic convertible top, removing and installing

  - Manual convertible top ⇒ 61-1, Manual convertible top, removing and installing

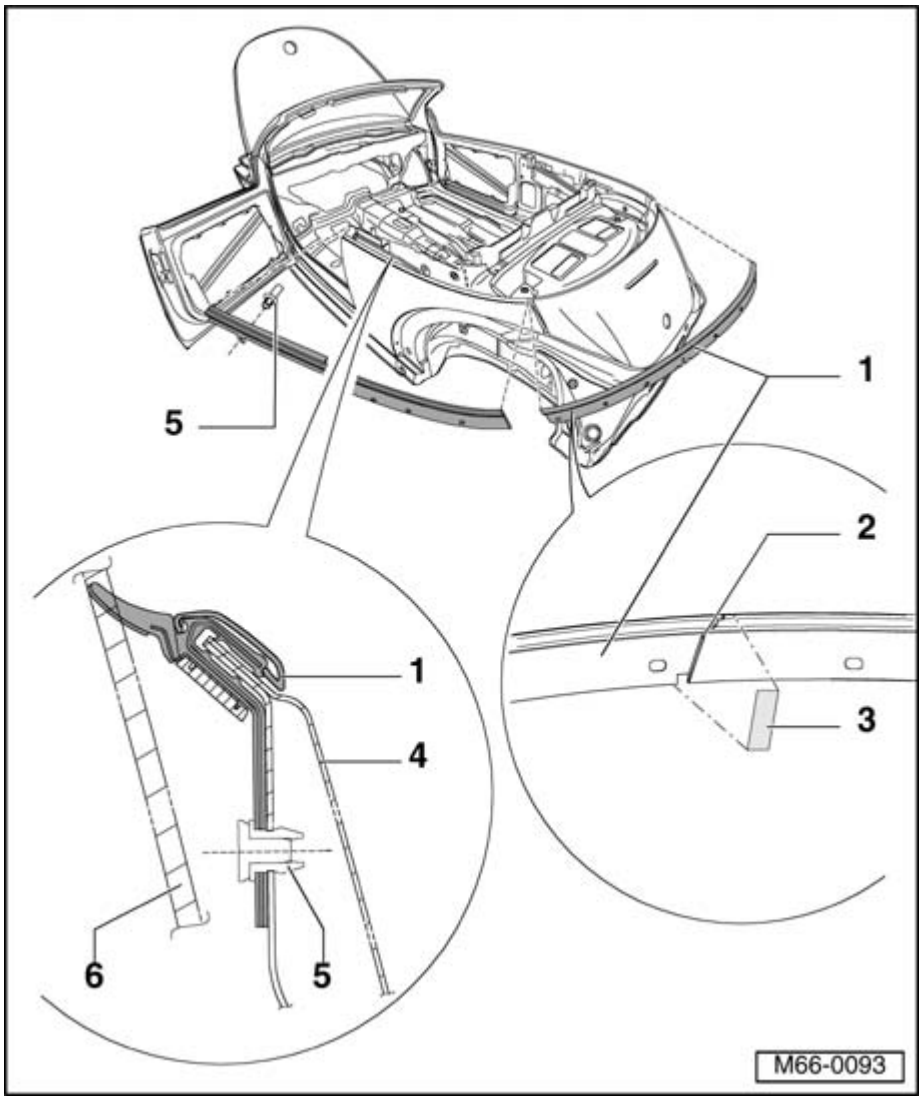


- Remove expanding rivet **- 5 -** .

- Pull protective strip **- 1 -** upward and remove.

Installing

Protective moldings



- Press strip **- 1 -** onto edge of side panel on left and right.

- Press in expanding rivet **- 5 -** .

- Press center of protective strip **- 1 -** onto edge of rear panel.

- Seal connection using Butyl sealing cord **- 2 -** .

- Bond textile strip **- 3 -** over connecting point.

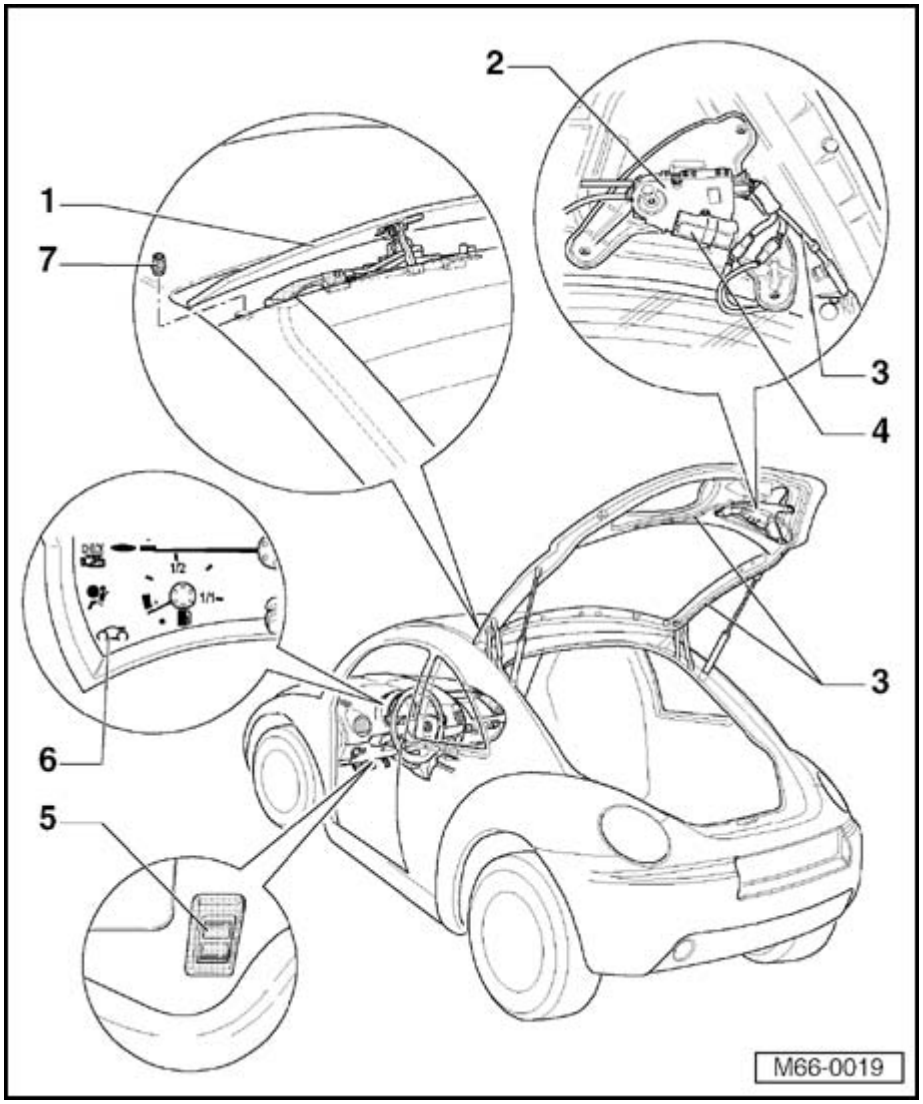
- Install convertible top fabric retaining frame:

  - Electric-/hydraulic convertible top ⇒ 61-1, Electric-/hydraulic convertible top, removing and installing

  - Manual convertible top ⇒ 61-1, Manual convertible top, removing and installing

Rear spoiler

Assembly overview



- **Rear spoiler - installation unit**
  - With links, guide tubes and cables
  - Grease link guides using G 000 450 02
  - Removing and installing ⇒ 66-5, Rear spoiler - installation unit, removing and installing
  - Parallel movement, checking and adjusting ⇒ 66-5, Parallel movement, checking and adjusting
- **Rear Spoiler Control Module**

J223

- Self-diagnosis

⇒ *Repair Manual, Body Self-diagnosis, Repair Group 01, Self-diagnosis for rear spoiler*

- Removing and installing ⇒ 66-5, Rear spoiler motor, removing and installing , rear spoiler drive, removing and installing

- **Lower guide tubes**
  - Removing and installing ⇒ 66-5, Lower cable guide tubes, removing and installing

- **Rear Spoiler Motor V52**
  - Removing and installing ⇒ 66-5, Rear spoiler motor, removing and installing , rear spoiler drive, removing and installing

- **Rear Spoiler Switch E127**
  - Below instrument panel near steering column
  - For raising and lowering rear spoiler "manually" ⇒ 66-5, Manual rear spoiler, raising and lowering

- **Rear spoiler adjustment warning lamp**
- **Rubber buffer**

Function

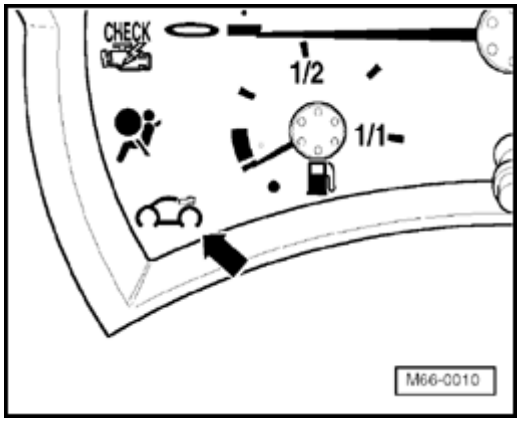
Rear spoiler raises automatically when vehicle speed reaches approx. 150 km/h. If sunroof is tilted or open at this speed, it will close automatically.

If speed drops below 130 km/h, rear spoiler will lower automatically. Sunroof will not open again.

Rear Spoiler Control Module J223 detects malfunctions in rear spoiler system and stores them in permanent memory.

Using self-diagnosis, these malfunctions can be read out and appropriate repair measures can be taken

⇒ *Repair Manual, Body Self-diagnosis, Repair Group 01, Self-diagnosis for rear spoiler*



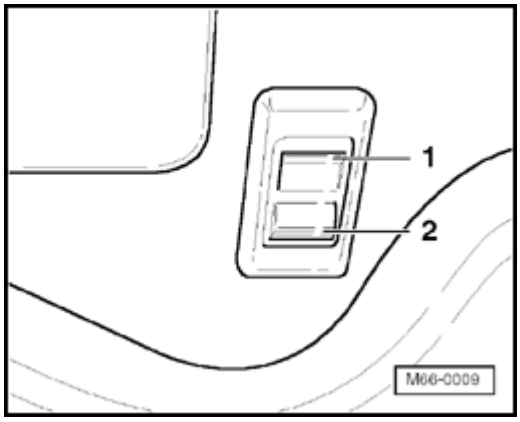
Malfunction in rear spoiler system will be indicated via warning lamp for rear spoiler **- arrow -** when operated automatically. Additionally, warning lamp lights up when rear spoiler is raised "manually" ⇒ 66-5, Manual rear spoiler, raising and lowering .

Warning!

Vehicle behavior may change when rear spoiler does not raise!

"Manual" rear spoiler, raising and lowering

Rear Spoiler Switch E127 is located below instrument panel (near steering column) for raising and lowering rear spoiler "manually" . "Manual" raising and lowering of rear spoiler is only possible when vehicle is stationary and at speeds below 150 km/h.



Rear spoiler will raise completely in one movement when ignition is on and switch is operated in position **- 1 -** .

Lowering is executed in several steps until limit stop when switch is in position **- 2 -** .

Warning!

There is a danger of being jammed!

Observe that there is enough clearance for raising and lowering rear spoiler "manually" when switch is operated.

Always raise rear spoiler before performing necessary repair work.

Note:

- *Do not lower rear spoiler (or raise further) by hand.*

Rear spoiler motor, removing and installing

Removing

Note:

- *Rear Spoiler Control Module J223 and Rear Spoiler Motor V52 are integrated in one component and are designated in this description as rear spoiler drive.*

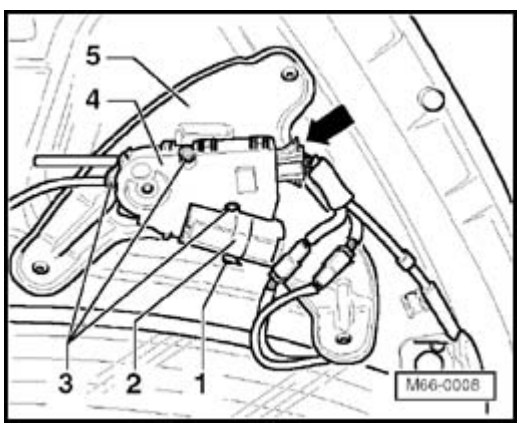
- Raise rear spoiler "manually" ⇒ 66-5, Manual rear spoiler, raising and lowering .

- Remove rear lower lid trim

⇒ *Repair Manual, Body Interior, Repair Group 70, Rear lid trim; removing and installing lower trim for rear lid*

Warning!

Before working on electrical system: Disconnect battery ground (GND) strap.



- Disconnect harness connector from rear spoiler drive **- 4**

- - arrow - .

Note:

- *Harness connectors in wiring harness can be unhooked from bracket at lower guide tube **- 5 -** .*

- Loosen bolt **- 1 -** and open hose clip **- 2 -** (unhook).

- Remove bolts **- 3 -** and remove drive **- 4 -** from lower guide tube **- 5 -** . Tightening torque: Bolts **- 3 -** = 2.5 Nm

Installing

- Installation is performed in the reverse order of removal.

Additionally, the following work steps must be carried out:

- Before installing rear spoiler drive, check or reinstate parallel movement ⇒ 66-5, Parallel movement, checking and adjusting .

- After completing drive installation, lower rear spoiler first, then "manually" raise and lower ⇒ 66-5, Manual rear spoiler, raising and lowering it completely again to initiate drive limit stop positions.

Rear spoiler - installation unit, removing and installing

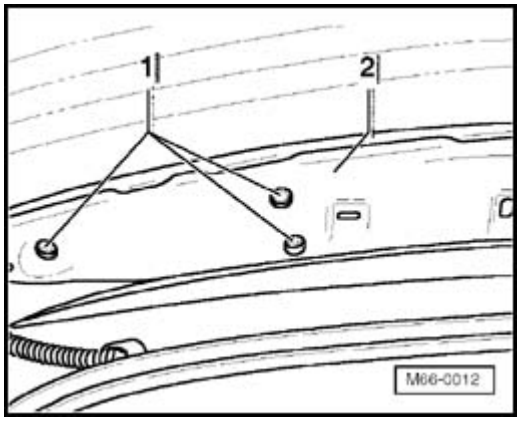
Removing

- Raise rear spoiler "manually" ⇒ 66-5, Manual rear spoiler, raising and lowering .

- Remove rear lid trim

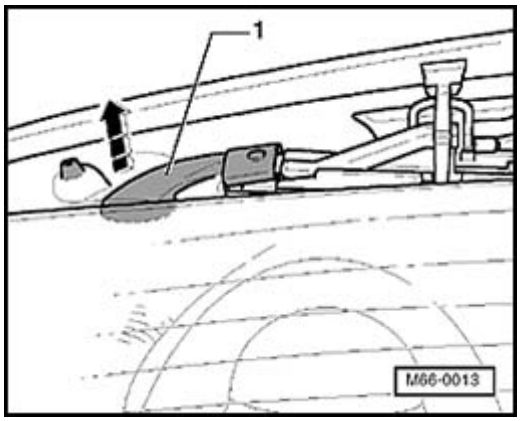
⇒ *Repair Manual, Body Interior, Repair Group 70, Rear lid trim*

- Remove rear spoiler drive ⇒ 66-5, Rear spoiler motor, removing and installing .

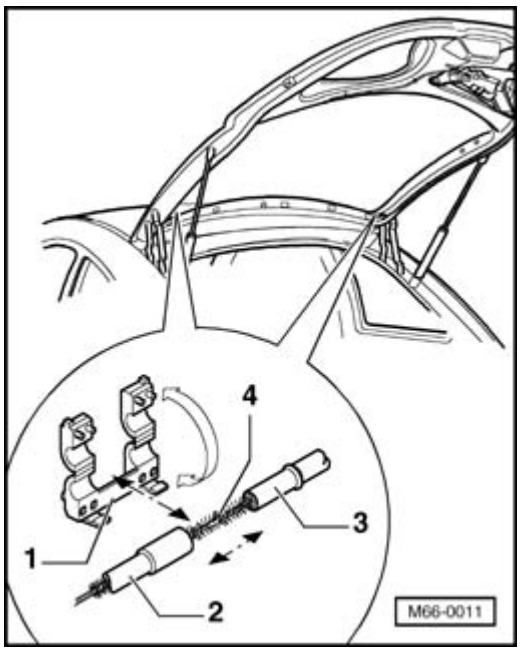


- Remove six bolts **- 1 -** on left and right at upper edge of

rear lid **- 2 -** .



- Disengage sealing grommets **- 1 -** on left and right of lid **- arrow -** .



- Open clips **- 1 -** at left and right.

Note:

- *Replace damaged clips **- 1 -** when installing.*

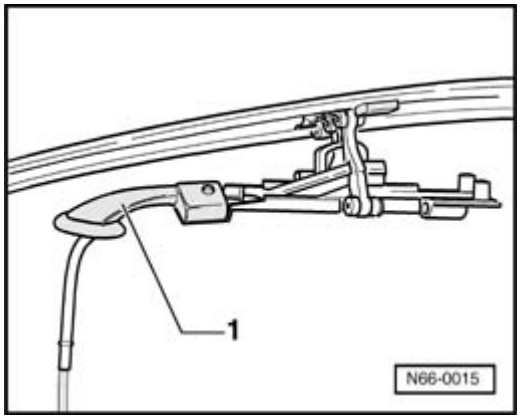
- Remove rear spoiler installation unit from vehicle. To do so, disengage from clip **- 1 -** and pull apart lower guide tube **- 2 -** and upper guide tube **- 3 -** when removing rear spoiler installation unit.

- When removing rear spoiler installation unit, pull cables **- 4 -** on left and right out of lower guide tube **- 2 -** .

Installing

- Installation is performed in the reverse order of removal.

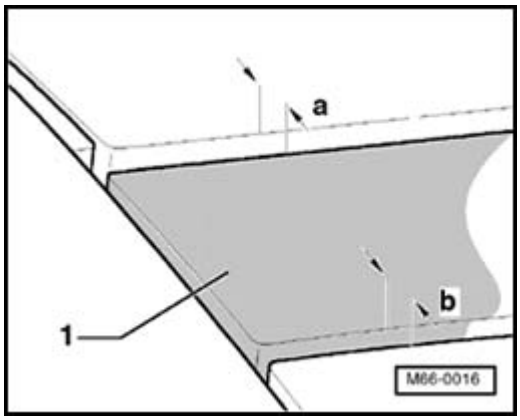
Additionally, the following work steps must be carried out:



- Before installing rear spoiler installation unit at rear lid, check condition of sealing grommets **- 1 -** . Sealing grommets must seal rear lid reliably. Replace hardened, porous or cracked sealing grommets.

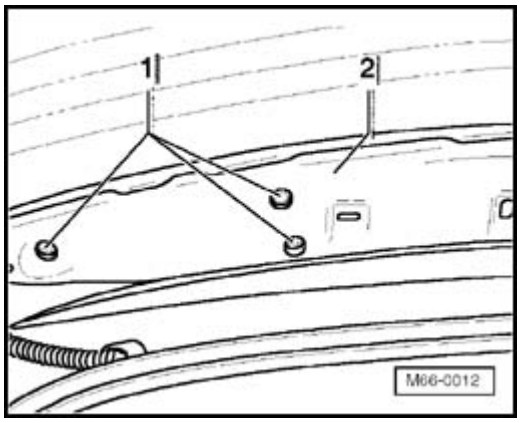
- If necessary, grease link guides using special grease G 000 450 02 only.

- After installing rear spoiler installation unit to rear lid, check or reinstate parallel movement ⇒ 66-5, Parallel movement, checking and adjusting .



- Before installing rear lid trim, check alignment of rear spoiler **- 1 -** at lid and correct if necessary.

- Rear spoiler must be seated centrally (left/right) at lid.
- Dimension **- a -** = 6 mm
- Dimension **- b -** = 5 mm



- To align rear spoiler, loosen bolts **- 1 -** on left and right on upper edge of rear lid **- 2 -** and then move rear spoiler installation unit within oversized holes. Tightening torque: Bolts **- 1 -** = 6 Nm

Parallel movement, checking and adjusting

Note:

- *If parallel movement is not adjusted correctly, malfunctions or tensions in rear spoiler mechanism will occur. When operating rear spoiler "manually" , rear spoiler may not stop in raised or lowered position but may raise and lower continuously.*

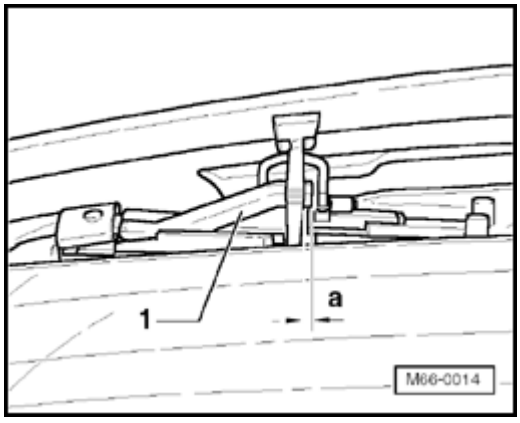
- *A cause for non parallel running can be wear in cables in area of rear spoiler drive or worn drive gear wheel.*

- Raise rear spoiler "manually" ⇒ 66-5, Manual rear spoiler, raising and lowering .

Checking

Note:

- *Illustration shows link on left side.*



- Links **- 1 -** must be in same (parallel) position on left and right side. When rear spoiler is raised,

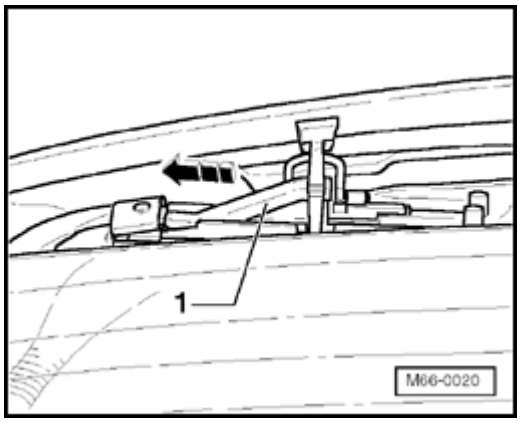
dimension **- a -** must be the same on both links **- 1 -** .

Setting

- Remove rear lower lid trim

⇒ *Repair Manual, Body Interior, Repair Group 70, Rear lid trim; removing and installing lower trim for rear lid*

- Remove rear spoiler drive ⇒ 66-5, Rear spoiler motor, removing and installing .



- Push left and right links **- 1 -** by hand until stop toward outside of vehicle **- arrow -** (position: rear spoiler completely raised).

- Install rear spoiler drive ⇒ 66-5, Rear spoiler motor, removing and installing .

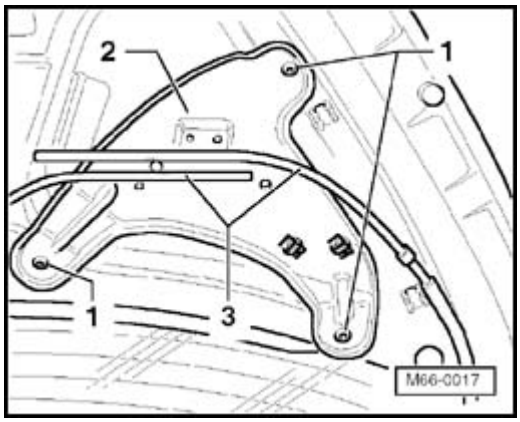
- After completing drive installation, lower rear spoiler first, then "manually" raise and lower ⇒ 66-5, Manual rear spoiler, raising and lowering it completely again to initiate drive limit stop positions.

Lower cable guide tubes, removing and installing

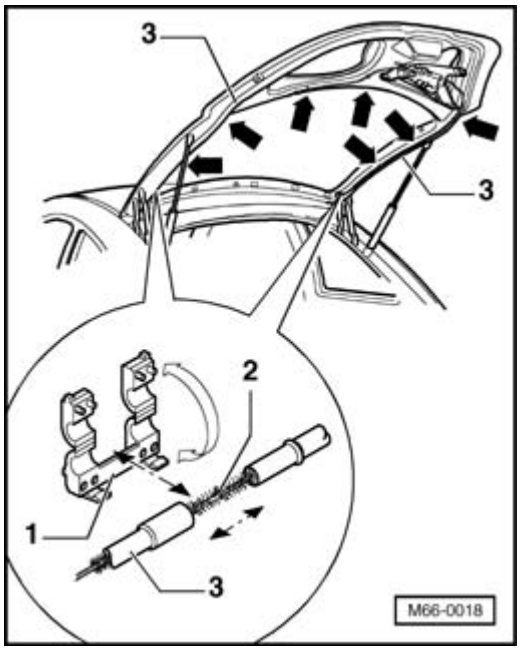
- Remove rear lid trim

⇒ *Repair Manual, Body Interior, Repair Group 70, Rear lid trim*

- Remove rear spoiler drive ⇒ 66-5, Rear spoiler motor, removing and installing .



- Remove bolts **- 1 -** of bracket **- 2 -** for lower guide tubes **- 3 -** . Tightening torque: Bolts **- 1 -** = 8 Nm



- Open clips **- 1 -** at left and right.

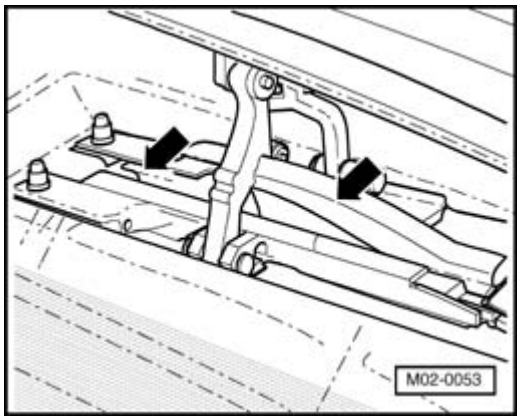
Note:

- *Replace damaged clips **- 1 -** when installing.*

- Unclip lower guide tube **- 3 -** on left and right from rear lid **- arrows -** and pull off from cable **- 2 -** .

Rear spoiler rods, lubricating

Rear spoiler



- Grease rear spoiler rods using G 052 778 **- arrows -** .

Wind deflector

Wind deflector bearing, removing and installing

Removing

- Switch ignition off.
- Remove seatbench

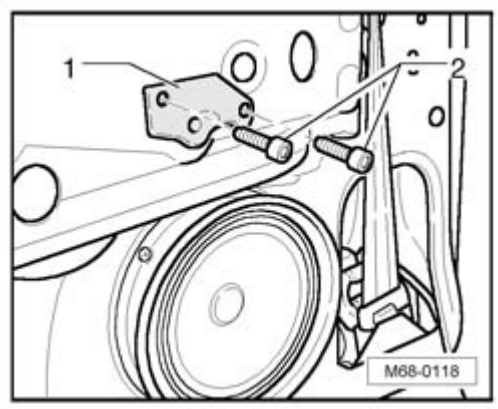
⇒ *Repair Manual, Body Interior, Repair Group 72,*

- Remove backrest

⇒ *Repair Manual, Body Interior, Repair Group 72,*

- Remove side trim

⇒ *Repair Manual, Body Interior, Repair Group 70,*



- Remove bolts **- 2 -** (2x, 10 Nm) and remove wind deflector bearing **- 1 -** from side panel.

Installing

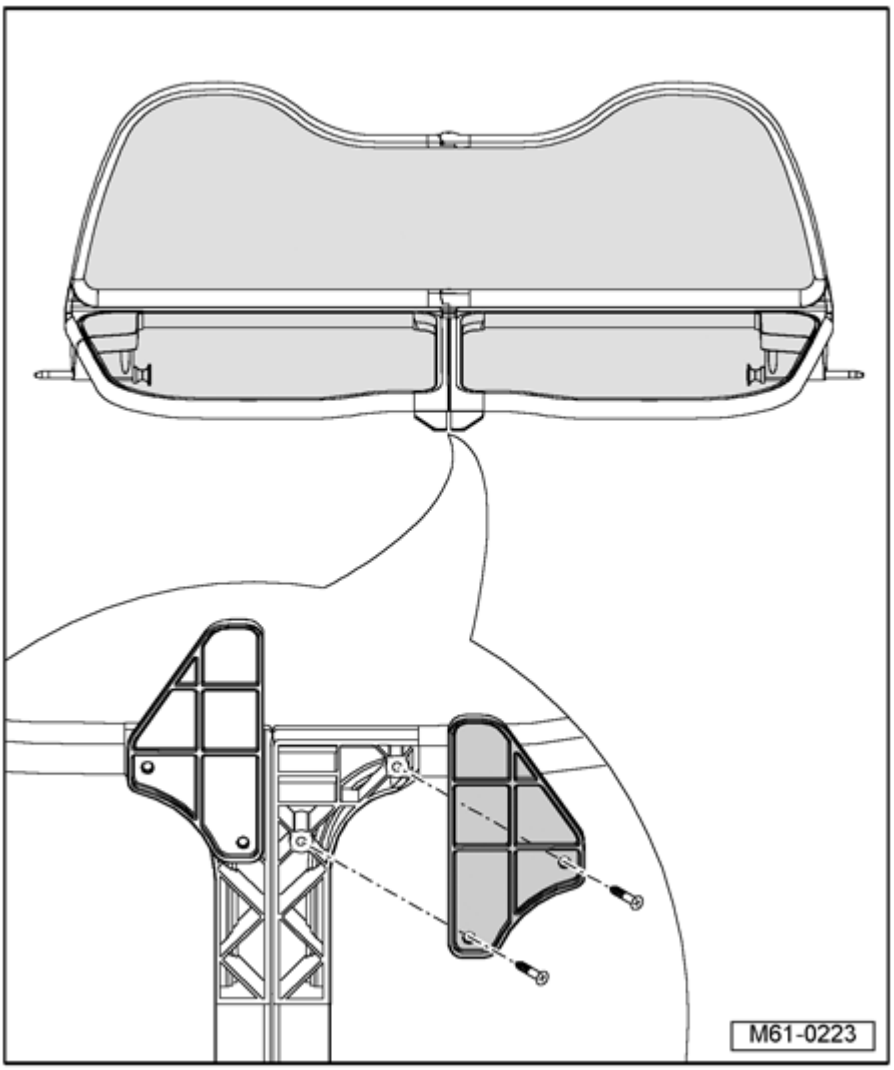
- Installation is performed in the reverse order of removal.

Rear wind deflector bracket, removing and installing

Removing

- Remove wind deflector.

Wind deflector



- Remove two bolts, respectively, and remove corresponding wind deflector bracket.

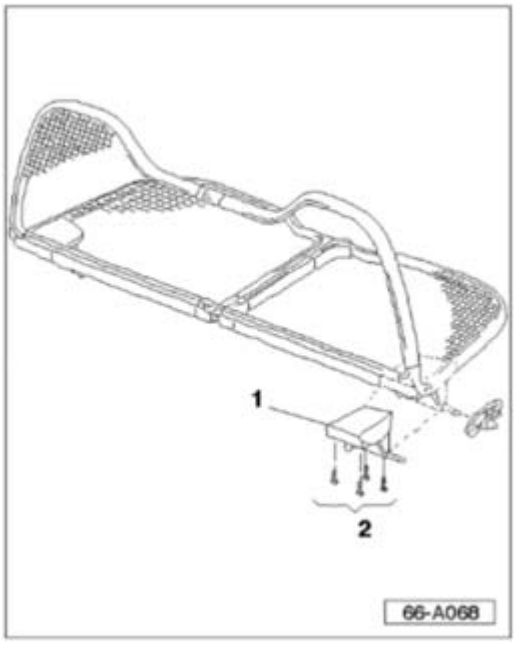
Installing

- Installation is performed in the reverse order of removal.

Wind deflector locking pin assembly, removing and installing

Removing

Wind deflector



- Remove screws **- 2 -** (Qty. 4) on locking pin assembly **- 1 -**

Installing

Install new locking pin assembly **- 1 -** and screws **- 2 -** (Qty. 4).

Tightening torque: 1.5 Nm ± 0.2 Nm

Note:

- *Do not reuse screws. Always use new screws that come with locking pin assembly kit.*